

OE Week 2023
3-Day Virtual FDP on
Creating Engaging OER for Engineering Education
March 8-10, 2023

KBR & HL Human Development Foundation
&
Hyderabad Institute of Technology & Management (HITAM)



Session 1.1 Understanding OER & CC Licenses

By
Dr. Indira Koneru Yalavarthi
Founder, KBR & HL Human Development Foundation



Understanding OER & Creative Commons Licenses by Indira Koneru Yalavarthi is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).



Session Overview

- OER for Crises Management
- Understanding OER & CC Licenses
- Integrating OER in Teaching-Learning-Assessment
- Sources of OER



FDP Learning Outcomes

- Find OER relevant to Indian Engineering Education
 - [Finding OER & Building Attribution Template](#)
- Build TASL attribution using [Open Attribution Builder](#)
- Convert OER into engaging and interactive content using Lumi [H5P desktop app](#)
- Publish interactive H5P OER on [Lumi Cloud](#) with an appropriate attribution and a CC License
- Embed CC-licensed interactive content (H5P & PhET simulations) in Moodle LMS courses
- Create H5P assessment activities in LMS courses



FDP Pre-requisites

● FDP preparatory activities

- Complete Understanding Open Educational Resources course available at_ <https://colcommons.org/>
- Be ready with their personal laptop or PC and Course Outcomes and Unit Outcomes
- Create an account on e-KUMBH and download one 2nd / 3rd / 4th year textbook
- Download and install [Lumi desktop app](#)
- Create an account on [Lumi Cloud](#)



OER for Crises Management

2008
recession

- Decide between buying a textbook or groceries!
- Prof. Richard Baraniuk, Rice University founded OpenStax in 2012 to make college textbooks
 - free for students
 - open-licensed

COVID-19
Crisis

- Demand for OpenStax open textbooks doubled during pandemic
- Level of OER awareness increased in India
- But, did not translate to increased OER adoption

Ukraine
war
response

- [Free online resources for Ukrainians settling in the UK](#)
- [LibreTexts Ukrainian Library](#)

— “ —

I founded OpenStax in 2012 as a then-radical solution: Why not make college textbooks free for students? And why not make them open-licensed so that faculty could easily customize them to create the perfect course?

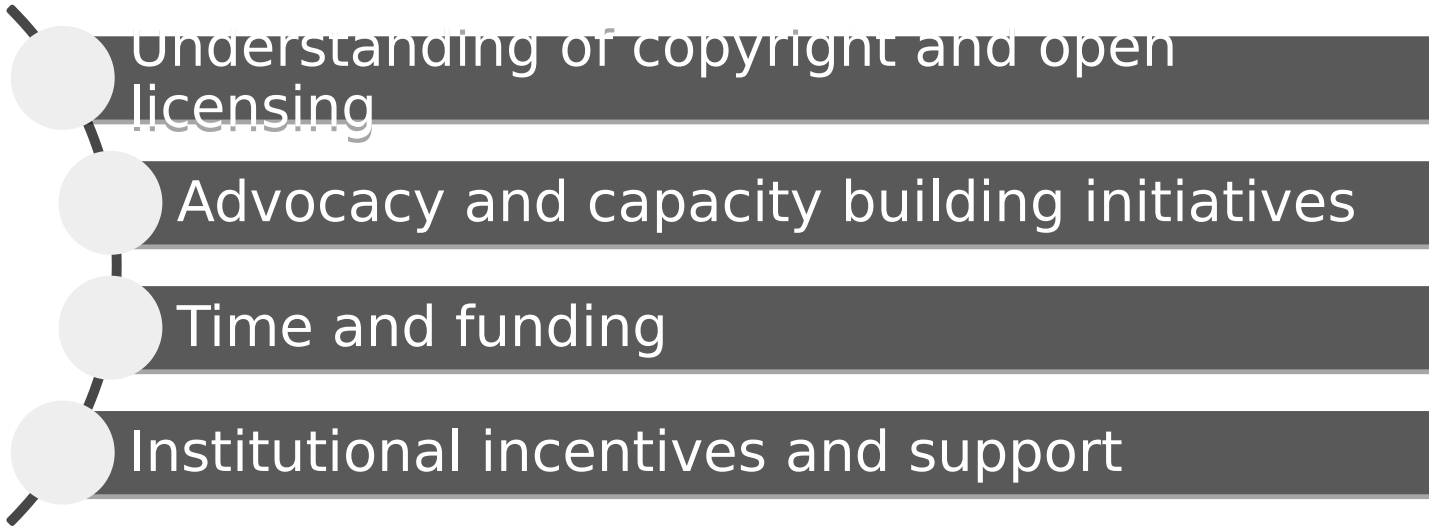
— ” —

Prof. Richard Baraniuk



OER Adoption in India

- OER adoption in India is relatively low due to lack of (Mishra & Singh, 2017)



History of OER

- MERLOT by California State University (1997) – Free access to HE online curriculum materials
- Open Content License (David Wiley, 1998)
- Connexions, Rice University (1999) → OpenStax
- Creative Commons (Lessig et al., 2001)
- MIT OCW (2001)
- CC Licenses (2002)
- UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries, 2002
- 1st World OER Congress, 2012 - Paris Declaration
- 2nd World OER Congress, 2017
- UNESCO Recommendation on OER, 2019



UNESCO Recommendation on OER

- Recommendation on OER, 2019 outlines *five areas of action*
 - *building capacity of stakeholders to create, access, re-use, adapt and redistribute OER*
 - developing supportive policy
 - encouraging inclusive and equitable quality OER
 - nurturing the creation of sustainability models for OER
 - facilitating international cooperation

UNESCO Recommendation on Capacity Building

Building awareness among relevant stakeholder communities on how OER can

increase access to educational and research resources
improve learning outcomes

Providing continuous capacity building for educators

Promoting use of open licenses to encourage development and use of OER

Leveraging FOSS to ensure OER can be easily found, accessed, re-used, adapted and redistributed

AICTE Recommends OER Use



प्रो. एम.पी. पूनीयाँ
उपाध्यक्ष

Pr

Vice-Chairman



सत्यमेव जयते

अखिल भारतीय तकनीकी शिक्षा परिषद्

(भारत सरकार का एक सांविधिक निकाय)

(शिक्षा मंत्रालय, भारत सरकार)

नेल्सन मंडेला मार्ग, वसंत कुंज, नई दिल्ली-110070

दूरभाष : 011-26131495

ई-मेल : vcm@aicte-india.org

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(A STATUTORY BODY OF THE GOVT. OF INDIA)

(Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

Phone : 011-26131495

E-mail : vcm@aicte-india.org

F. No./FDC/DIR(PS)/MISC./01/2022-23

Date 03.01.2023

Sub: Open Educational Resources (OER)– Reg

Sir/Madam

Greetings from AICTE New Delhi.

It is informed that worldwide there are large number of the Open Educational Resources (OER) useful for the students and faculty members. Some of these OER are as follows:

1. **Commonwealth of Learning (COL):** Online micro courses platform for different courses.

URL: <https://colcommons.org/>

2. **British Columbia Open Text Book Project:** The B C Open Collection by B Campus is a curated selection of open educational resources(OER) that can be accessed by educators in B.C. and beyond to use in the classroom, in an institutional learning management system, or on other teaching and learning platforms. URL: <https://collection.bccampus.ca/>

3. **Rice University Open Stax:** This OER is a part of Rice University with the mission to improve educational access and learning for everyone. Openly licensed books, developing and improving research-based courseware, establishing partnerships with educational resource companies, and more are part of it. URL: <https://openstax.org/>

4. **e-Campus Ontario:** It is a provincially-funded non-profit organization that leads a consortium of the province's publicly-funded colleges, universities and indigenous institutes to develop and test online learning tools to advance the use of education technology and digital learning environments. URL: <https://www.ecampusontario.ca/>

5. **Skills Commons:** This OER is to accelerate the democratization of education for all through open educational services and resources enabling individuals, communities, educational institutions, organizations, and businesses to prepare people for successful employment in the 21st Century. URL: <https://www.skillscommons.org/>

6. **Libre Texts:** The objective of this platform is to unite students, faculty and scholars in a cooperative effort to develop an easy-to-use online platform for the construction, customization, and dissemination of open educational resources (OER) to reduce the burdens of unreasonable textbook costs to our students and society. URL: <https://libretexts.org/>



UGC ODL & Online Programmes Regulations, 2020



Allow up to 40% of the total courses being offered in a particular programme in a semester through the Online Learning courses / Massive Open Online Courses



Online learning shall have the four quadrant approach



60 % of eLearning material shall be developed in-house



40% can be sourced from OER & other institutions



Convert the courses into Online Programmes

learning videos with recording or dubbing or editing facilities for graphics or animation creation

e-content for reading and improving comprehension of learners

tests and assignments for testing understanding

discussion forum that clarifies the doubts of the learners

Why Open Education Matters?



[Open Education Matters: Why is it important to share content?](#) by [Nadia Mireles](#) is licensed under [CC BY 3.0](#)

Open Educational Resources

“Teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an *open license* that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions” (*UNESCO*)

Open license respects the intellectual property rights of the copyright owner and provides permissions granting the public the *rights to access, re-use, re-purpose, adapt and redistribute* educational materials (UNESCO, 2019)

Open Educational Resources (OER) are teaching, learning, and research materials that are either (a) in the public domain or (b) licensed in a manner that provides everyone with free and perpetual permission to engage in the 5R activities (Creative Commons)

5 Rs of OER

Creative Commons License grants retain/re-use/revise/remix/redistribute rights

content



Reuse - right to use the content in a wide range of ways



Revise - right to adapt, adjust, modify, or alter the content itself



Remix - right to combine the original or revised content with other open content to create something new



Redistribute - right to share copies of the original content, your revisions, or your remixes with others



Asynchronous Activities on LMS

- [H5P Drag the words | 5Rs of OER](#)
- [H5P Drag & Drop | Match CC Icons](#)
- [H5P Question Set | Creative Commons Quiz](#)



Knowledge Check 1

- Which of the following best describes an OER?

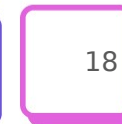
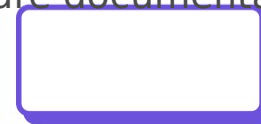
Which of the following describes an OER?

- ☐ Being free to view online
- ☐ Being free of cost and having an open license
- ☐ Being sourced from a reputable publisher
- ☐ Being available in high resolution formats

✓ Check

Open License

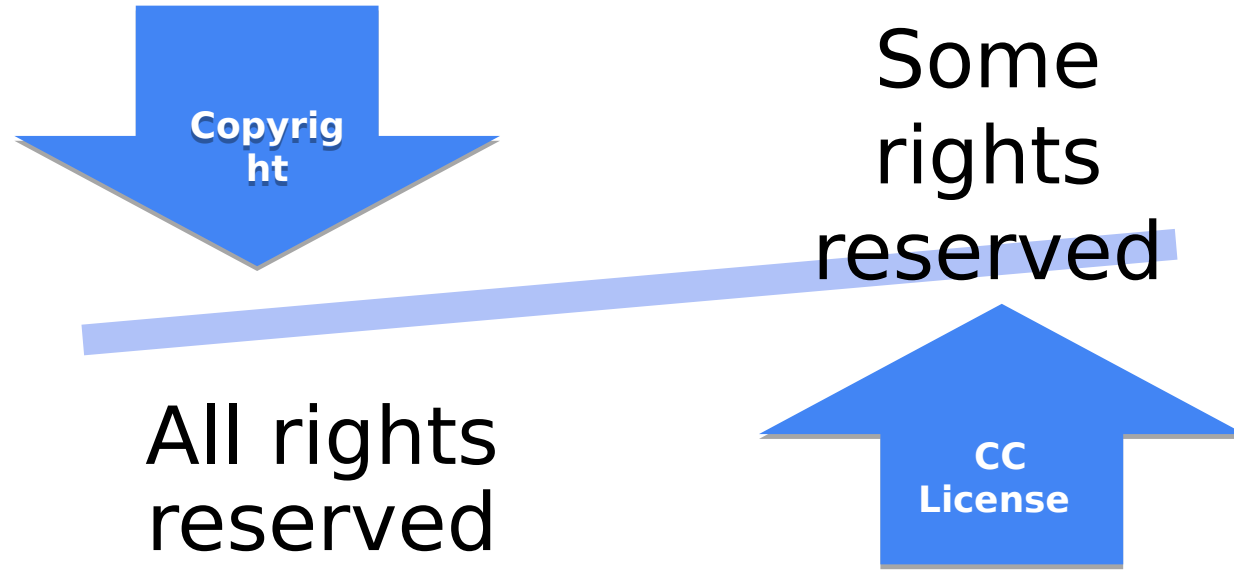
- A set of conditions applied to an original *work* to
 - grant permission for anyone
 - make use of that work at no cost
 - build on it, customize it or improve it with no or minimal restrictions
 - as long as they follow the conditions of the license
- A *work* refers to – an original creation protected with copyright
 - document, image, video, song, or software
- Common open licenses
 - *Creative Commons* for written works, music, visual and other artistic expressions
 - GNU Free Documentation License for software documentation



Creative Commons (CC)

- **Creative Commons, a non-profit organisation founded by Lary Lessig et al. in 2001**
- **Goal is to increase the amount of openly works freely available for legal use, sharing, repurposing & remixing**
- **Provide easy-to-use open licenses for creative works**
- **Help creators retain copyright while permitting others to reuse**
- **Ensure licensors get the credit for their work they deserve**
- **Develop technology like [CC Search](#) / [OpenVerse](#) (for searching images and audio)**
- **Current CC license version is 4.0 International License**





Copyright vs Creative Commons









Copyright vs. Creative Commons License

Copyright	Creative Commons License
Copyright ownership retained	Copyright ownership retained
Author does NOT grant rights to the public	Grants rights in advance
Permission required to reuse	Permission not required <i>Attribution</i> required
Need to contact the copyright holder (this takes a long time)	No need to contact the creator Create proper attribution in <i>TASL</i> format prior to reuse

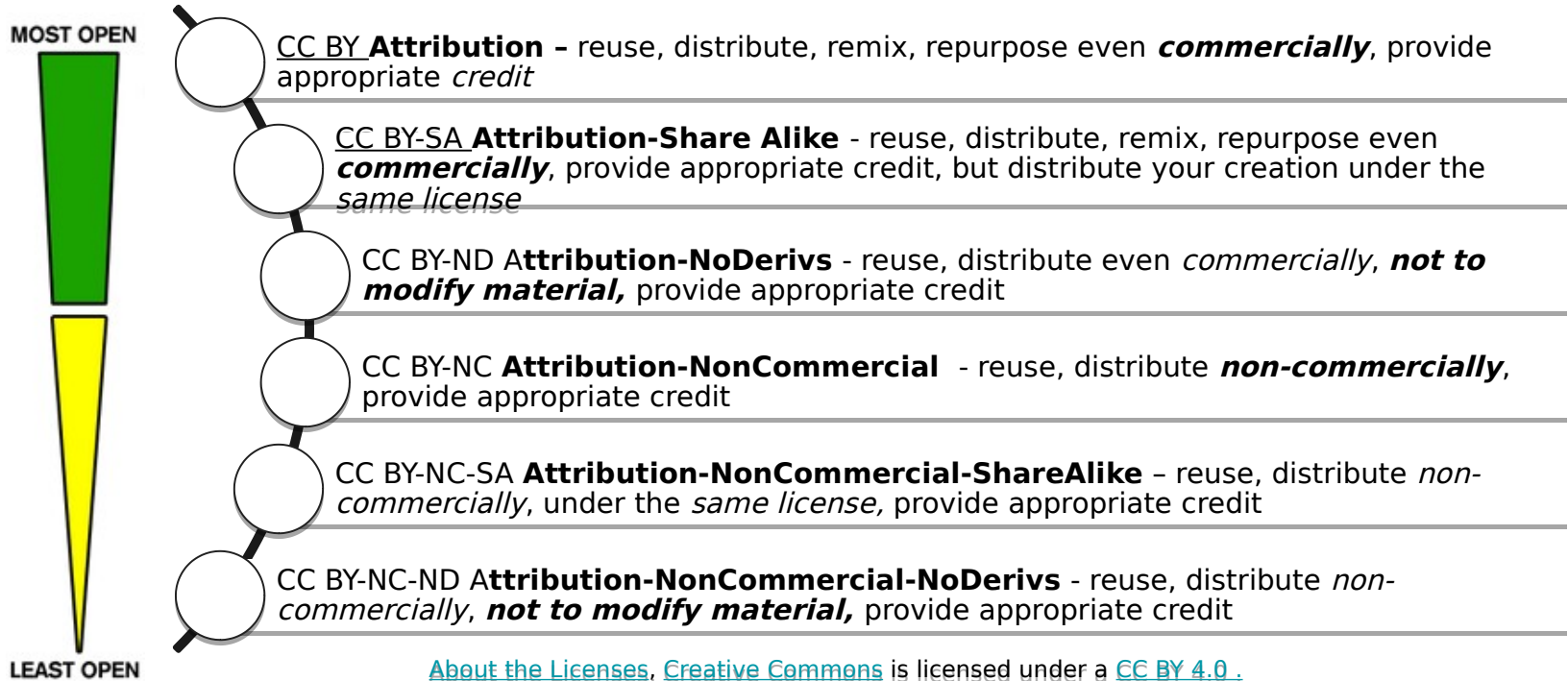
4 Basic CC License Elements

	License Component	Description
	Attribution (BY)	Attribution must be given to the creator of the copyright work
	Share Alike (SA)	Permits others to distribute derivative works only under a license identical to that of the original work
	Non-commercial (NC)	Permits others to copy, distribute, reuse the work, including any derivative works based upon it – but for non-commercial purposes only
	No Derivative Works (ND)	Permits others to copy, distribute, display and perform exact copies of the work only, but cannot make derivative works based upon it

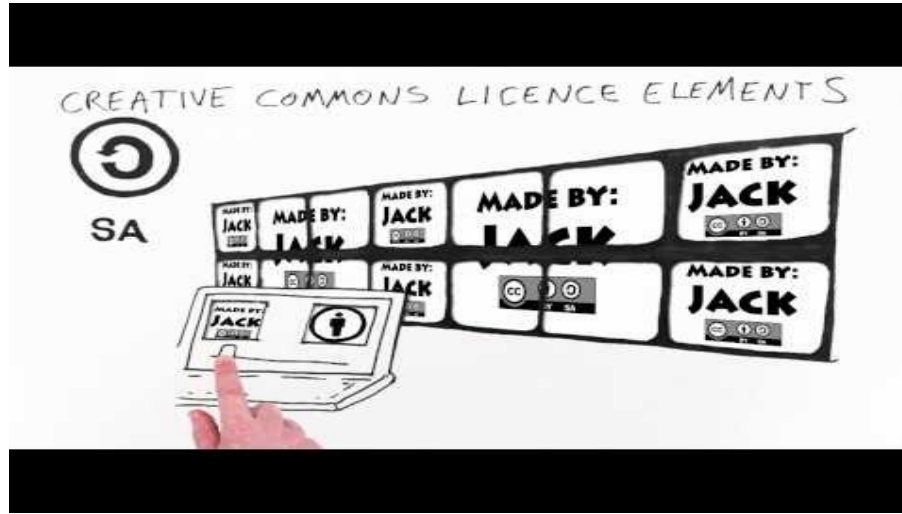
Creative Commons Six Core Licenses

All CC licenses require that users provide attribution (BY) to the creator			
Attribution		Attribution — NonCommercial	
Attribution — ShareAlike		Attribution — NonCommercial — ShareAlike	
Attribution — NoDerivs		Attribution — NonCommercial — NoDerivs	

Most Open to Least Open CC Licence



Creative Commons Licences Explained



Source: Creative Commons Kiwi by [plccanz](https://creativecommons.org/licenses/by/4.0/),
[CC-BY](https://creativecommons.org/licenses/by/4.0/)

CC0 | Public Domain



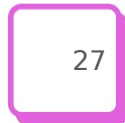
- Works with licenses expired or are explicitly released with no restriction on their usage
- Allows copyright owners to release their works with *no restrictions at all*
- Apply CC0 to your own work, not to another person's work



Knowledge Check 2

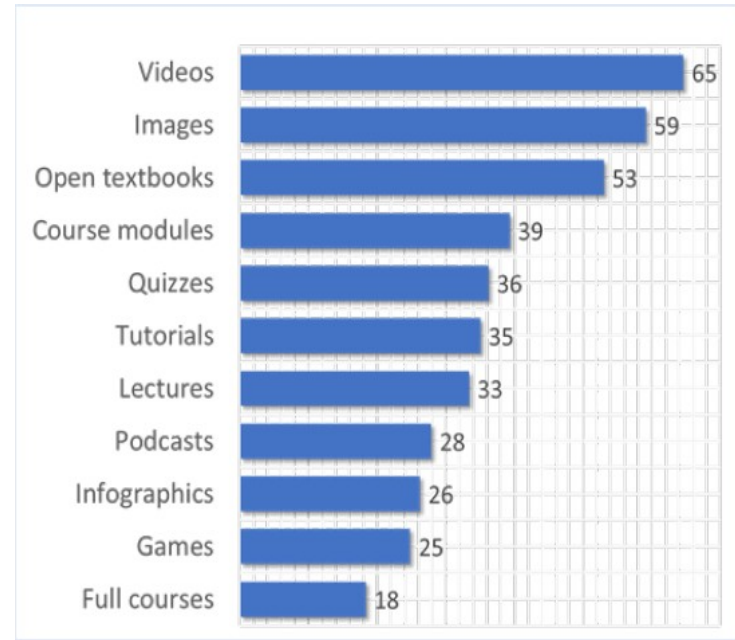
- Which of the following are key reasons why open licenses are important for OER?

- ☐ Open licenses guarantee a monetary return on all content shared with them
- ☐ Creative Commons (CC) licenses make it easy to share with different permissions
- ☐ Open licenses let us keep permissions that copyright automatically gives away
- ☐ Open licenses make it clear how others can use your work
- ☐ All the licenses include a requirement for attribution, or giving credit to the creator
- ☐ Some Creative Commons (CC) licenses are interoperable so we can remix OER with different licenses



Types of OER & Usage by Educators

- Open textbooks
- Full courses & course modules
- Multimedia & interactive content
- Quizzes
- Games
- Ancillary Material (e.g. lecture notes, lesson plans, PowerPoint presentations, assignments, and activities)



Source: OER Research Hub Data 2013-2015: Educators

Why OER!

Increasing access to quality learning materials



Broadening student access to a variety of learning resources



Saving textbooks costs for students



Improving student performance and satisfaction



Reducing faculty content development time



Adapting creatively for improved learning outcomes



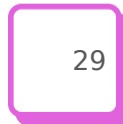
Promoting collaborative teaching-learning practices



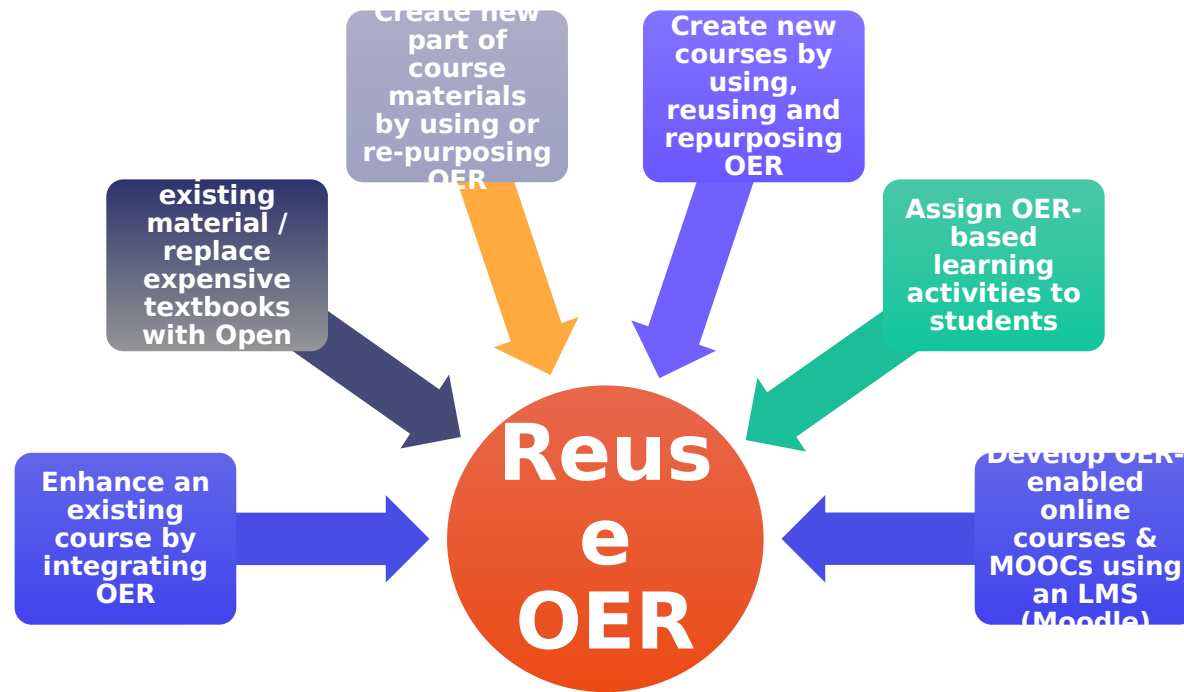
Providing “quality education and lifelong learning for all” #SDG4



ENSURE INCLUSIVE AND EQUITABLE QUALITY
EDUCATION AND PROMOTE LIFELONG
LEARNING OPPORTUNITIES FOR ALL



Integrating OER in Teaching-Learning-Assessment



OER-enabled Activities & Assessments

Faculty Resources

Faculty Resource Overview

Pacing

PDF

PowerPoints

Assignments

Question Banks

3: Faculty Resources

Last updated: Jul 1, 2020

◀ 2.3: Learning Outcomes | 3.1: Faculty Resource Overview ▶

3.1: Faculty Resource Overview

3.2: Pacing

3.3: PDF

3.4: PowerPoints

3.5: Assignments

3.6: Question Banks

Click the name of your LMS to prompt the download of the file.

- [Canvas](#)
- [Blackboard](#)
- [D2L](#)
- [Moodle](#)

**15 question banks with a total of
374 multiple choice questions**

Once you've downloaded the file, visit the [Quiz Imports](#) page and click through to the directions for your LMS.

Lumen Learning. *Organizational Behavior / Human Relations*



oeglobal.org

Knowledge Check 3

- Which of the following are common motivators for OER use in education?

Which of the following are common motivators for OER use in education?

- ☐ Reducing the cost of education through free learning materials
- ☐ Saving instructors preparatory time for their courses
- ☐ Giving faculty full control of the content to innovate with
- ☐ Providing a discount on the price of traditional publisher textbooks

✓ Check





Sources of OER

Open Textbooks

- [OpenStax](#) (Rice University)
- [BC Open Textbooks](#)
- University of Minnesota [Open Textbooks](#)
- [Open SUNY Textbooks](#): State University of New York libraries
- [Lyryx](#) Open Textbooks
- [CK-12](#) FlexBook® textbooks: open source digital textbooks
- [Open Textbook Network](#)
- [LibreTexts](#)
- [Intech](#) Science, Technology & Medicine
- [Pressbooks Directory](#)
- [eCampus Ontario](#)
- [WikiBooks](#)
- [e-KUMBH](#) ([CC BY-NC-SA 4.0](#))



e-KUMBH

- **NEP 2020** emphasizes on imparting education in mother tongue
- AICTE's **e-KUMBH** provides outcome-based Technical Education Books
- In 12 Indian Languages
- 2nd, 3rd & 4th year books in English as well as 12 Indian Languages are Attribution-Non Commercial-Share Alike 4.0 International ([CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/)) compliant



Open Courses & Course Materials

- [MIT Open Courseware](#)
- [Open Learn , UK OU](#)
- [CMU OLI](#)
- [Open Course Library](#)
- [Saylor Academy](#)
- [Yale Open Courses](#)
- [University of Irvine](#)
- [NPTEL Online Courses](#)
- [OERu](#)
- [Lumen Learning](#)
- [Achieving the Dream](#)
- [COL OASIS Course Learning Materials](#)

Sinhgad Institute in Pune, India embraces
#OER in pilot to lower cost for Masters in
Computer Application degree



Saylor/SIMCA Partnership - Saylor Academy

Students in India may Earn Credits Towards a Master of
Computer Applications Degree Through Saylor.org/Sinhgad
Institute of Management and Computer Application (SIMCA) Par...
[saylor.org](#)

7:52 AM - 30 Apr 2016



Organizations Providing Zero Cost Course Materials

- [Affordable Learning Georgia](#)
- [BC Open Collection](#)
- [CK-12](#)
- [College Open Textbooks](#)
- [Creative Commons Search](#)
- [Lumen](#)
- [OER Commons](#)
- [Open Course Library](#) at Open Washington
- [Open Learning Initiative](#) at Carnegie Mellon University
- [OpenStax College](#)
- [Open Textbook Library](#)
- [eCampus Ontario](#)
- [MERLOT](#)
- [Orange Grove Digital Repository](#)
- [PHET Interactive Simulations](#)
- [Open Education Consortium](#)
- [Khan Academy](#)
- [Saylor.org](#)
- [WikiEducator](#)
- [Cool4Ed](#)
- [Skill Commons](#)
- [LibreCommons](#)



Open Education Initiatives in India

- NPTEL (7 IITs & IISc)
 - NPTEL Courses ([CC BY-NC-SA 4.0](#))
- IIT Bombay Spoken Tutorial ([CC BY-SA 4.0](#))
- e-PG Pathshala – (MHRD & NME-ICT) e-content in 71 subjects at PG level)
- Vidya-Mitra ([CC BY-SA 4.0](#))
- e-KUMBH ([CC BY-NC-SA 4.0](#))
 - 2nd, 3rd & 4th year books in English & 12 Indian Languages are CC BY-NC-SA 4.0 compliant

- MOOCs
 - NPTEL
 - IITBx ([CC BY-SA 4.0](#))
 - IIMBx
 - ISB
 - SWAYAM

Interactive Content

H5P Interactive Content

- + eCampus Ontario [H5P Studio](#)
- + Wilfrid Laurier Library [H5P Creator](#)
- + [PressBook Directory](#)
- + [Learnful Canada](#)
- + [GC Share Canada](#)
- + [LibreStudio](#)
- + [H5P Catalogue](#) (India)
- + [OERu H5P Studio](#)

Simulations

- [NSDL Simulations](#)
- [PhET Simulations](#)
 - Founded in 2002 by Nobel Laureate Carl Wieman
 - Free interactive simulations
 - Physics
 - Chemistry
 - Math
 - Earth Science
 - Biology
 - Mutli-lingual
 - Multiple levels
 - [Accessible & inclusive features](#)



How to attribute a CC Licensed Work!



TASL

Title - Copy the title of the work to be adopted

Author - Copy author's name and web page *link*, if available

Source - *Hyperlink* the title to the original source

License - Copy the CC license name and *hyperlink* to the CC license deed page

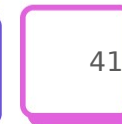
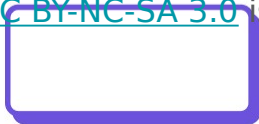
Attribution Examples

+Image

- + [Health Information Systems](#) by [Giulia Forsythe](#) is licensed under [CC BY 2.0](#)
 - + **T**itle - Health Information Systems
 - + **A**uthor / Creator - [Giulia Forsythe](#) linked to her profile page
 - + **S**ource - [Health Information Systems](#) is linked to original Flickr page
 - + **L**icense - [CC BY 2.0](#) is linked to the license deed

+Course Content

- + [Module 8: Electronic Health and Medical Records](#) ©2013 [Open Learning Initiative](#) is licensed under [CC BY-NC-SA 3.0](#)
 - + **T**itle - Module 8: Electronic Health and Medical Records
 - + **A**uthor / Creator - [Open Learning Initiative](#) linked to the project page
 - + **S**ource - [Module 8: Electronic Health and Medical Records](#) is linked to the original source
 - + **L**icense - [CC BY-NC-SA 3.0](#) is linked to the license deed



Queries

